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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/491,694	01/26/2000	David L. Multer	FUSN1-010002US0	8944

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VIERRA MAGEN MARCUS HARMON & DENIRO LLP
685 MARKET STREET, SUITE 540
SAN FRANCISCO, CA 94105

EXAMINER

KING, JUSTIN

ART UNIT PAPER NUMBER


2181

DATE MAILED: 03/07/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/491,694	Applicant(s) MULTER, DAVID L. 	
	Examiner Justin I. King	Art Unit 2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 and 34-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-32 and 34-37 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>12</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 17 is objected to because of the following informalities: Claim 17 states “a second system” on claim 17’s line 8; Examiner recommends changing it to “a second device”. Claim 17 states “the device” on claim 17’s lines 2 and 8; Examiner recommends changing them to “the first device” and “the second device” respectively. Appropriate correction is required.
2. Claim 20 is objected to because of the following informalities: Claim 20 states “from the data store to” and “at least the first data file on to” on claim 20’s line 2. Examiner recommends changing them to “from the data store” and “at least the first data file to” respectively. Appropriate correction is required.
3. Claim 31 is objected to because of the following informalities: Claim 31 states “a device sync engine” on claim 31’s line 3. Examiner recommends changing it to “a first device sync engine”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 21, 25-26, and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 21 recites the limitation "the first sync engine" and "the second sync engine" on claim 21's line 2. There is insufficient antecedent basis for this limitation in the claim.

Claims 25, 26, and 30 recite the limitations "the first file" and "the second file" on claim 25's lines 3 and 9, claim 26's line 2, and claim 30's line 2. There are insufficient antecedent bases for these limitations in the claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-13, 15-32 and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Alam et al. (U.S. Patent No. 6,324,544) and Bodnar et al. (U.S. Patent No. 6,295,541).

Referring to claim 1: Alam discloses a system for synchronizing data between a first system (figure 1, structure 14) and a second system (figure 1, structure 12) including a first sync

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engine (figure 1, structure 36) on the first system interfacing with data on the first system to provide difference information in a difference transaction (figures 7A-7B, column 10, lines 24-52), a second sync engine (figure 1, structure 24) on the second system coupled to receive the difference information in the difference transaction, and interfacing with data on the second system to update said data on the second system with said difference information (figures 7A-7B, column 12, lines 15-47).

Alam does not disclose a data store coupled to network and in communication with the first and second systems.

Bodnar discloses a system for synchronizing two or more datasets with a Grand Unification database (GUD), which is the claimed data store coupled to network and in communication with first and second systems. Bodnar teaches that it is known to equip the data store to support the synchronization for more than two datasets (column 3, lines 15-30). Hence, it would have been obvious to one having ordinary skill in the computer art to adopt Bodnar's teaching to Alam because Bodnar enables one to synchronize more than two devices' datasets.

Referring to claim 2: Claim 1's argument applies; furthermore, Alam's figure 1 discloses a private network between a mobile device and desktop computer.

Referring to claim 3: Claim 1's argument applies; furthermore, Bodnar discloses the Internet connection (figure 2).

Referring to claims 4 and 6-7: Claim 1's argument applies; furthermore, Bodnar discloses that each of the first and second system has a two-way communication with the data store (figure 2, column 10, lines 66-67, column 11, lines 1-2); hence, Bodnar discloses that the difference information is transmitted to the data store by the first sync engine and received from the data

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store from the second sync engine, the second sync engine interfaces with said data on the second system to provide second difference information to the data store, and the first sync engine couples to the data store to retrieve the second difference information and interfaces with the data on the first system to update said data on the first system with said second difference information.

Referring to claim 5: Claims 1 and 4's arguments apply; furthermore, Bodnar discloses that the difference information is transmitted to the data store at a first point in time, and received from the data store at a second, subsequent point in time (figure 7C).

Referring to claim 8: Claim 1's argument applies; furthermore, Bodnar discloses the synchronization support components including the scheduling management and transaction management (column 37, lines 49-67, column 38, lines 1-14), which is a management server coupled to the network and in communication with the first sync engine, the second sync engine and the data store.

Referring to claim 9: Claims 1 and 8's arguments apply; furthermore, Bodnar's scheduling management schedules synchronization activity and determines whether synchronization is scheduled or performed only upon demand (column 37, lines 66-67, column 38, lines 1-5); the scheduling is authorizing access of difference information on the data store by the first and second sync engines.

Referring to claim 10: Claims 1 and 8's arguments apply; furthermore, Alam discloses that it is commonly known the file is locked when it is in used (column 2, lines 58-65). Bodnar discloses a plurality of binary synchronizations in synchronizing more than two devices (figure

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7A); hence, Bodnar discloses locks access to difference information on the data store during communication.

Referring to claim 11: Claim 1's argument applies; furthermore, Bodnar discloses a first device (figure 2, structures 22, 27, 42, 47, and 267), coupled to the first system via the network, providing said data to the first system.

Referring to claim 12: Claims 1 and 11's arguments apply; furthermore, Bodnar discloses that the first system is a sync server (figure 2, structure 265, TrueSync Data Synchronization).

Referring to claim 13: Claims 1 and 11's arguments apply; furthermore, both Alam and Bodnar disclose the data comprising changes to the data from its previous state, and said difference information comprising said changes in an encoded, universal format (Alam, column 11, lines 6-37, Bodnar, column 7, lines 28-29).

Referring to claim 15: Claims 1 and 13's arguments apply; furthermore, Bodnar discloses that the data on the first system comprises application data having a plurality of application specific formats (figure 2, structures 40, 45), and said difference information is provided for each of said formats in a universal format to said data store (Alam, column 11, lines 6-37, Bodnar, column 7, lines 28-29).

Referring to claim 16: Claim 1's argument applies; furthermore, Bodnar discloses a plurality of sync engines being coupled to receive difference information from each of said first, second and plurality of sync engines from the data store via the network, and each said engine interfacing with data on the system on which it resides to update said data on said system on which it resides with said difference information, and interface with data on said system on

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which it resides to provide difference data information from the system on which it resides to the data store (figure 2).

Referring to claim 17: Alam discloses a system comprising a first device (figure 1, structure 14) including at least a first data file (figure 1, structures 32 and 34) and first differencing code (figure 1, structures 36, figures 7A-7B, column 10, lines 24-52), having an input and an output coupled to a network to receive first device data change transactions from, and to provide change transactions generated by the first differencing code based on said at least one data file to said network, a second system (figure 1, structure 12) including at least a second data file (figure 1, structures 20 and 22) and second differencing code (figure 1, structure 24, figures 7A-7B, column 10, lines 24-52), having an input and an output coupled to the network to receive said first device data change transactions from, and to provide second change transactions generated by the second differencing code based on said at least second data file to network.

Alam does not disclose a data store coupled to network and in communication with the first and second systems.

Bodnar discloses a method and system for synchronizing two or more datasets with a Grand Unification database (GUD), which is the claimed data store coupled to network and in communication with first and second systems. Bodnar teaches that it is known to equip the data store to support the synchronization for more than two datasets (column 3, lines 15-30). Hence, it would have been obvious to one having ordinary skill in the computer art to adopt Bodnar's teaching to Alam because Bodnar enables one to synchronize more than two devices' datasets.

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Referring to claim 18: Claim 17's argument applies; furthermore, Bodnar discloses the Internet connection (figure 2).

Referring to claim 19: Claim 17's argument applies; furthermore, Bodnar discloses that the difference information is transmitted to the data store at a first point in time, and received from the data store at a second, subsequent point in time (figure 7C).

Referring to claim 20: Claim 17's argument applies; furthermore, claim 20 is rejected with the additional argument stated in claim 7's rejection above.

Referring to claim 21: Claim 17's argument applies; furthermore, claim 21 is rejected with the additional argument stated in claim 8's rejection above.

Referring to claim 22: Claim 17's argument applies; furthermore, claim 22 is rejected with the additional argument stated in claim 9's rejection above.

Referring to claim 23: Claim 17's argument applies; furthermore, claim 23 is rejected with the additional argument stated in claim 12's rejection above.

Referring to claim 24: Claim 17's argument applies; furthermore, Bodnar discloses that the differencing code comprising an application object (figure 2, structures 30, 35), an application object store (figure 2, structures 32, 37), and a transaction management (column 38, paragraph 2), which operates equivalently to the delta engine.

Referring to claim 25: Alam discloses a method including steps of determining difference data resulting from changes to the first file on the first system, generating a difference data transaction, transmitting the difference data, retrieving the difference data to the second system, and updating the second file on the second system with the difference data (figures 1, 7A-7B, column 10, lines 24-52). Alam does not disclose a server via the Internet connection for

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transmitting the difference data, for querying to determine whether at least one difference data transaction existing, and for updating with the difference data.

Bodnar discloses a system for synchronizing two or more datasets with a Grand Unification database (GUD) with the Internet connection, which is the claimed data store coupled to network and in communication with first and second systems. Bodnar teaches that it is known to equip the data store to support the synchronization for more than two datasets (column 3, lines 15-30). Hence, it would have been obvious to one having ordinary skill in the computer art to adopt Bodnar's teaching to Alam because Bodnar enables one to synchronize more than two devices' datasets.

Referring to claim 26: Claim 25's argument applies; furthermore, Bodnar discloses the comparing a current instance of the first file to a stored instance of the first file and generating said difference data (figure 11B).

Referring to claims 27-28: Claim 25's argument applies; furthermore, Bodnar discloses synchronization support components (column 37, lines 49-67, column 38, lines 1-14), which is a management server and authorization retrieving activities.

Referring to claim 29: Claim 25's argument applies; furthermore, Alam discloses that it is commonly known the file is locked when it is in used (column 2, lines 58-65). Bodnar discloses a plurality of binary synchronizations in synchronizing more than two devices (figure 7A); hence, Bodnar discloses locks access to difference information on the data store during communication.

Referring to claim 30: Claim 25's argument applies; furthermore, Bodnar discloses different synchronization modes (column 10, line 67, column 11, lines 1-2, figure 2) including

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bi-directional synchronization; hence, Bodnar teaches applying the difference data to a stored instance of the second file on the second system.

Referring to claim 31: Alam discloses a first device including a device sync engine and a second device including a second device sync engine (figure 1). Alam does not disclose an Internet connected storage server. Bodnar discloses a system for synchronizing two or more datasets with a Grand Unification database (GUD) with the Internet connection, which is the claimed data store coupled to network and in communication with first and second systems. Bodnar teaches that it is known to equip the data store to support the synchronization for more than two datasets (column 3, lines 15-30). Hence, it would have been obvious to one having ordinary skill in the computer art to adopt Bodnar's teaching to Alam because Bodnar enables one to synchronize more than two devices' datasets.

Referring to claim 32: Claim 31's argument applies; furthermore, claim 32 is rejected with the additional argument stated in claim 8's rejection above.

Referring to claim 34: Claim 31's argument applies; furthermore, an "Official Notice" is taken on the following: an encoded and compressed Internet data transmission is a common practice for data security (ex. https protocol) and for reducing the size of transmitted file (ex. WinZip).

Referring to claim 35: Claim 31's argument applies; furthermore, Bodnar discloses data transfers comprising difference transaction (figures 11A-11E).

Referring to claim 36: Claim 31's argument applies; furthermore, Bodnar discloses that each device includes applications having data in an application specific format (figure 2, structures 40, 45, 30, 35), and wherein communication between the first device, the second

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device and the storage server include changes to said data in an application independent format (column 7, lines 28-29).

Referring to claim 37: Claim 31's argument applies; furthermore, Bodnar discloses that the device sync engine comprising an application object (figure 2, structures 30, 35), an application object store (figure 2, structures 32, 37), and a transaction management (column 38, paragraph 2), which operates equivalently to the delta engine.

Response to Arguments

9. Applicant's arguments with respect to claims 1-32 and 34-37 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

10. The following is a statement of reasons for the indication of allowable subject matter: Claim 14 discloses that the sync engine resided on each device includes *a copy of a previous state of the data*. No prior art discloses or suggest the sync engine including a copy of a previous state of the data.

Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,449,622 to LaRue et al.: LaRue discloses a system and method for synchronizing datasets when dataset changes may be received out of order.

U.S. Patent No. 6,487,560 to LaRue et al.: LaRue discloses a system and method for communicating between multiple devices for synchronization even across communication mediums that are susceptible to high latency or non-FIFO order.

U.S. Patent No. 6,401,104 to LaRue et al.: LaRue discloses a system and method for synchronizing datasets using cooperation among multiple synchronization engines.

U.S. Patent No. 6,044,381 to Boothby et al.: Boothby discloses the using of distributed history files in synchronizing databases.

U.S. Patent No. 5,742,792 to Yanai et al.: Yanai discloses a remote data mirroring.

U.S. Patent No. 5,897,642 to Capossela et al.: Capossela discloses method and system for software version control and integrating an object-based application.

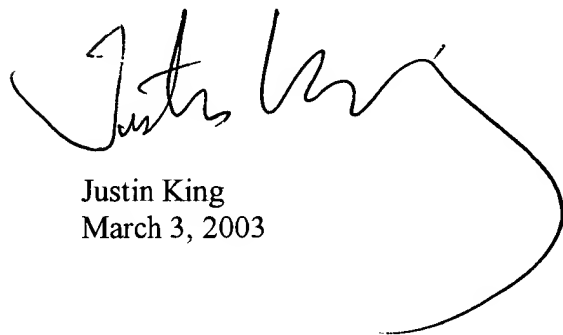
"TrueSync Data Synchronization" by Starfish: Starfish's introduction of the TrueSync protocol on its official web site (<http://www.lstarfishsoftware.com/solutions/data/data.html>).

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin King whose telephone number is (703) 305-4571. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephones are unsuccessfully, the examiner's supervisor, Mark Reinhart can be reached at (703) 308-3110.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose number is (703)-306-5631.



Justin King
March 3, 2003

Gopal C. Ray
GOPAL C. RAY
PRIMARY EXAMINER
GROUP 2100